

In the claims:

Please amend claims 1-34 as follows:

1. (Currently Amended) A heat Heat sink designed as a flat heat pipe comprising a body, with at least one interior space formed in the body ~~of the heat sink~~ and closed toward the outside with at least one vapor channel ~~or vapor area (18, 18.1)~~, with at least one fluid area ~~or~~ fluid channel ~~(16)~~ that is connected to the at least one vapor channel ~~(18, 18.1)~~ and has a porous or capillary structure, and with several spatially separated posts ~~(6)~~ extending through the interior and between two opposing walls ~~or wall sections~~ delimiting the interior, whereby the posts ~~(6)~~ and the opposing walls wall sections (3, 4) are all made of a material with high heat conductivity, ~~for example of metal, e.g. copper, characterized in that wherein~~ each post ~~(6)~~ is connected at both ends directly with one of the opposing walls wall sections (3, 4).
2. (Currently Amended) The heat Heat sink as claimed in claim 1, wherein characterized in that the capillary or porous structure comprises consists of particles ~~(8)~~, which are connected with each other by means of bonding or sintering and/or with an adjacent surface ~~(10)~~ in such a way that capillary flow paths are formed between the particles ~~(8)~~.
3. (Currently Amended) A heat Heat sink designed as a heat pipe with at least one interior space formed in the body of the heat sink and closed toward the outside with at least one vapor channel ~~or vapor area (18, 18.1)~~, with at least one fluid area ~~or~~ fluid channel ~~(16)~~ that is connected to the vapor channel ~~(18,~~

~~18.1)~~ and has a porous or capillary structure,
wherein characterized in that the capillary or porous
structure comprises ~~consists of~~ particles ~~(8)~~ made of
ceramic, ~~which are~~ connected with each other and/or
with an adjacent surface ~~(10)~~ by means of bonding or
sintering, so as to form capillary flow paths between
the particles ~~(8)~~.

4. (Currently Amended) The heat Heat sink as claimed in
claim 3, further comprising characterized by several
spatially separated posts ~~(6)~~ extending through the
interior and between two opposing walls ~~or wall~~
~~sections~~ delimiting the interior, whereby the posts
~~(6)~~ and the opposing walls ~~wall sections~~ ~~(3, 4)~~ are
all made of a material with high heat conductivity,
~~for example of metal, e.g. copper,~~ and whereby each
post ~~(6)~~ is connected at both ends directly with one
of the opposing walls ~~(3, 4)~~.

5. (Currently Amended) The heat Heat sink as claimed in
claim 3, wherein one of the foregoing claims,
characterized in that that particles are connected
with each other by means of metal stays, for example
copper stays ~~(9)~~, e.g. by means of copper stays
produced through DCB bonding.

6. (Currently Amended) A heat Heat sink comprising
~~designed as a flat heat pipe having a body with at~~
least one interior space formed in the body ~~of the~~
~~heat sink~~ and closed toward the outside with at least
one vapor channel ~~or vapor area~~, with at least one
~~fluid area~~ ~~or~~ fluid channel that is connected to the
vapor channel and having ~~has~~ a porous or capillary
structure, wherein characterized in that the
capillary or porous structure comprising ~~consists of~~ at
least partially of a loose mass of particles ~~(8)~~ in a

space ~~(32)~~, which is separated from the fluid area by an intermediate wall ~~(31)~~.

7. (Currently Amended) A heat Heat sink as claimed in claim 6, ~~wherein 11, characterized in that the intermediate wall ~~(31)~~ has a plurality of openings.~~

8. (Currently Amended) A heat Heat sink as claimed in claim 6, ~~wherein one of the foregoing claims,~~ characterized in that the particles are such made of metal and/or ceramic.

9. (Currently Amended) A heat Heat sink as claimed in claim 3, ~~wherein one of the foregoing claims,~~ characterized in that the capillary structure is formed from at least one ply or layer ~~(7)~~, which is applied at least on part of the inner surface ~~(10)~~ of the wall sections delimiting the at least one interior space ~~(2)~~, and enclosing the posts ~~(6)~~ at their respective connecting areas with these wall sections ~~(3, 4)~~.

10. (Currently Amended) A heat Heat sink as claimed in claim 9 ~~wherein one of the foregoing claims,~~ characterized in that the layer forming the capillary structure is applied at least on a partial area of the surface of the posts ~~(6)~~.

11. (Currently Amended) A heat Heat sink as claimed in claim 3 ~~wherein one of the foregoing claims,~~ characterized in that the posts ~~(6)~~ have a diameter that is considerably smaller in every direction of the diameter than the dimension of the interior in this direction of the diameter.

12. (Currently Amended) A heat Heat sink as claimed in
claim 3 wherein one of the foregoing claims,
characterized in that between the vapor space (18,
18.1) and the capillary structure forming the at
least one fluid channel there is an intermediate wall
(17, 17.1, 29).

13. (Currently Amended) A heat Heat sink as claimed in
claim 12, wherein characterized in that the
intermediate wall (17, 17.1, 29) is provided with a
plurality of openings or is made of a perforated
material.

14. (Currently Amended) A heat Heat sink as claimed in
claim 12, wherein one of the foregoing claims,
characterized in that the at least one intermediate
wall (17, 17.1) is parallel to the first wall
sections (3, 4).

15. (Currently Amended) A heat Heat sink as claimed in
claim 12, wherein one of the foregoing claims,
characterized in that the intermediate wall is formed
from a pipe section (29), preferably from a pipe
section pressed flat or formed in an oval profile.

16. (Currently Amended) A heat Heat sink as claimed in
claim 9, wherein one of the foregoing claims,
characterized in that at least two capillary
structures forming a fluid channel (16) and/or at
least two vapor channels (18, 18.1) are provided for.

17. (Currently Amended) A heat Heat sink as claimed in
claim 6, wherein one of the foregoing claims,
characterized in that the first and second wall
sections are each formed from plate-shaped walls (3,

4), which together with a peripheral wall (5) delimit the interior of the heat sink.

18. (Currently Amended) A heat Heat sink as claimed in claim 17, wherein ~~one of the foregoing claims,~~ characterized in that the first wall sections are formed from areas of a pipe section preferably pressed flat delimiting the interior of the heat sink.

19. (Currently Amended) A heat Heat sink as claimed in claim 4, wherein the heat sink comprises ~~one of the foregoing claims,~~ characterized in that it consists of several plates (3, 4, 19) located one above the other in the manner of a stack and connected with each other at the surfaces, of which plates in the inside of the stack are provided with openings 20 -so that these openings form a channel structure through the interior of the heat sink and that the structured plates (19) are supplemented by areas outside of the openings (20) to the continuous posts (6) , and that the material forming the capillary structure is inserted in at least one area (21) of the channel structure.

20. (Currently Amended) A heat Heat sink as claimed in claim 19, wherein ~~one of the foregoing claims,~~ characterized in that the interior (26, 28) is formed by at least one depression or recess (25) in one of the plates (23, 24) forming the heat sink.

21. (Currently Amended) A heat Heat sink as claimed in claim 6, wherein ~~one of the foregoing claims,~~ characterized in that the particles (8) forming the capillary layer or structure (7) are provided in one

layer on the respective surface ~~(10)~~ of the walls delimiting the interior.

22. (Currently Amended) A heat Heat sink as claimed in claim 6, wherein one of the foregoing claims, characterized in that the particles ~~(8)~~ are connected directly with the respective surface ~~(10)~~, for example by means of DCB bonding.

23. (Currently Amended) A heat Heat sink as claimed in claim 6, wherein one of the foregoing claims, characterized in that the body of the heat sink is formed from a pipe section ~~(29)~~ that is closed at both ends.

24. (Currently Amended) A process Process for manufacturing a heat sink in the form of a heat pipe with at least one vapor channel formed in a closed interior and with at least one fluid channel with a porous or capillary structure, wherein characterized in that the porous or capillary structure is produced by insertion of a mass of particles made of a heat-resistant material, for example ceramic particles ~~(8)~~ and by subsequent DCB bonding upon heating to a bond temperature between 1065 and 1085°C.

25. (Currently Amended) A process Process as claimed in claim 24, wherein characterized in that the porous or capillary structure is produced by insertion of a mixture or mass of particles made of the heat-resistant material and pulverized copper oxide or oxidized copper particles and by subsequent DCB bonding.

26. (Currently Amended) A process Process as claimed in claim 24 or 25, wherein characterized in that the

mass or mixture additionally contains copper particles.

27. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that claim 25, wherein~~, after bonding and cooling, the excess portion of the mass or mixture is removed.
28. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that claim 24, wherein~~ the capillary or porous structure or layer is produced before sealing the interior of the heat sink.
29. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that claim 25, wherein~~ the mass or mixture forming the capillary structure is inserted in the interior through at least one opening and is distributed there before bonding, ~~for example~~ by shaking, vibration and/or or turning.
30. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that claim 24, wherein~~ during the manufacture of the porous or capillary structure at least one part of the interior of the heat sink forming a vapor area is filled or kept free by means of a support medium ~~(30, 31)~~ before bonding of the particles forming the porous or capillary structure.
31. (Currently Amended) A process ~~Process~~ as claimed in claim 30, wherein ~~characterized in that~~ the support medium ~~(30)~~ is removed after bonding or after manufacturing the porous or capillary structure.

32. (Currently Amended) A process ~~Process~~ as claimed in claim 30-~~or~~-31, characterized in that wherein the support medium (30) remains in the heat sink.

33. (Currently Amended) A process ~~Process~~ as claimed in ~~one of the foregoing claims, characterized in that claim~~ 30, wherein the support medium (30) is a particle-like medium, for example particles made of the heat-resistant material without the bond material.

34. (Currently Amended) A process ~~Process~~ as claimed in claim 30, wherein the one of the foregoing claims, characterized in that support medium is formed from a wall (31), for example from a pipe section forming this wall.